

ALUMINIUM ENCLOSED RESISTOR

TYPE CJH SERIES

INTRODUCTION

The CJH Series Aluminum Enclosed Braking Resistors are designed to provide reliable energy dissipation in dynamic braking and regenerative power applications. Built with a rugged aluminum enclosure, they offer excellent heat dissipation, mechanical strength, and long-term electrical stability. With power ratings up to 5000W, the CJH series is ideal for demanding industrial environments where high power handling and reliability are critical. These resistors are engineered to withstand high pulse loads and repetitive braking cycles while maintaining consistent performance. Their compact design enables easy integration into space-constrained systems. The series is well-suited for use in variable frequency drives, servo drives, inverters, and power conversion equipment. Vibration-resistant construction ensures dependable operation in harsh operating conditions. Combining durability, performance, and application flexibility, the CJH series is an ideal solution for modern motion control and industrial automation systems.



FEATURES

- Excellent thermal performance.
- High overload capability up to 10× rated power.
- Wide operating temperature range (-25°C to +250°C).
- Excellent electrical stability and reliability.
- Wide resistance value range.
- Compact and space-saving package.

APPLICATIONS

- Dynamic braking systems.
- Variable Frequency Drives (VFDs).
- Servo motors and drives.
- Industrial automation equipment.
- Power supplies.
- Inverters and converters.

ELECTRICAL CHARACTERISTICS

Type	CJH1250	CJH1500	CJH2000	CJH3000	CJH4000	CJH5000
Max. Continuous Power (W) (on Heat sink)	1250	1500	2000	3000	4000	5000
Max. Continuous Power (W) (Without Heat sink)	550	700	800	1100	1400	1800
Resistance Range	2Ω - 2KΩ	6Ω - 2KΩ	10Ω - 1KΩ	10Ω - 1.2KΩ	18Ω - 1.8KΩ	20Ω - 2.2KΩ
Tolerance	±5% to ±10% ±1% to ±10%					
Temperature Coefficient	±200 PPM/°C max					
Operating Temperature	-25°C to +250°C					

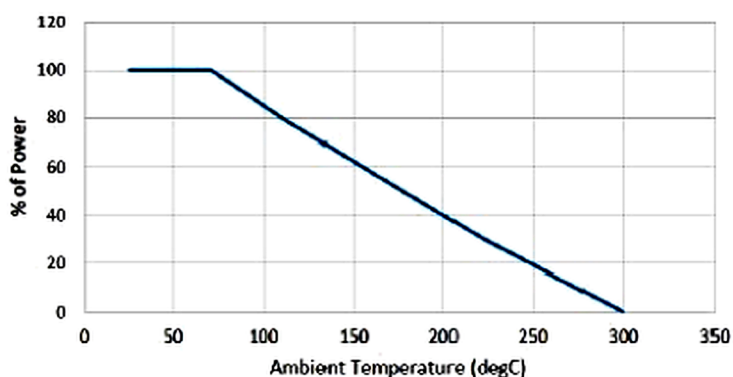
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ENVIRONMENTAL CHARACTERISTICS

Characteristics	Condition	Compliance
Tolerance	For Values less than 1Ω For Values greater than 1Ω	±5% to ±10% ±1% to ±10%
Insulation Resistance	Dry/Normal	>1000MΩ min.
Endurance	1.5 hrs ON, 0.5 hrs OFF for 500 hrs @Room Temperature	$\Delta R < \pm(5\% + 0.05\Omega)$
Short Term Overload	10× Rated Power for 5 sec	$\Delta R < \pm(2\% + 0.05\Omega)$
Humidity	40°C, 90% RH, 240 hrs	$\Delta R < \pm(3\% + 0.05\Omega)$
Dielectric Strength	3kVAC rms for 1 minute	No Breakdown or Flashover
Degree of Protection	IP65	

DERATING CURVE



VOLTAGE RATING

Resistors shall have a rated direct-current (DC) continuous working voltage or an approximate sine-wave root-mean-square (RMS) alternating-current (AC) continuous working voltage at commercial-line frequency and waveform corresponding to the power rating, as determined from the following formula:

$$RCWV = \sqrt{P \times R}$$

Note:

1. Max. working voltage or $\sqrt{P \times R}$ whichever is lesser
2. Max. overload voltage or $2.5 \sqrt{P \times R}$ whichever is lesser

Where : RCWV = Rated DC or RMS AC continuous working voltage at commercial-line frequency and waveform (volt) and

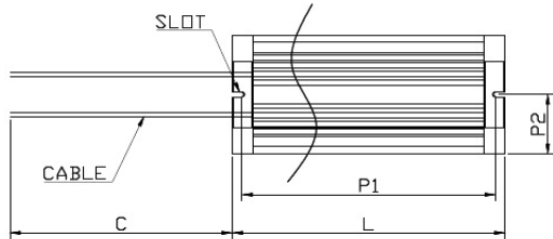
P = Power Rating (watt)

R = Nominal Resistance (ohm)

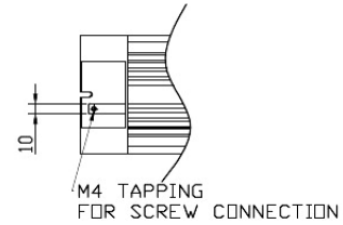


CONSTRUCTION AND DIMENSIONS (Unit: mm)

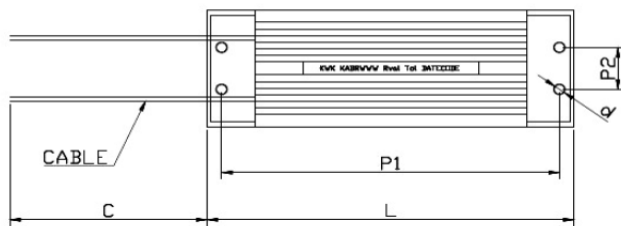
CJH1250 & CJH1500



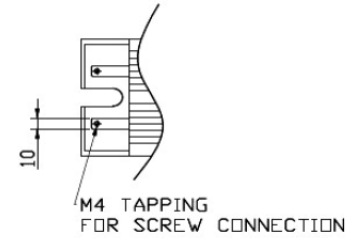
FLAT TYPE TERMINATION



CJH2000, CJH3000, CJH4000 & CJH5000



FLAT TYPE TERMINATION

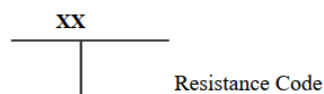


Type	L (mm)	W (mm)	H (mm)	C (mm)	P1 (mm)	P2 (mm)	Mounting Detail
CJH1250	400	67	38	290	385	NA	7x10 slot
CJH1500	495	67	38	290	480	NA	7x10 slot
CJH2000	400	103	52	290	390	40	Ø6 Holes
CJH3000	400	103	52	290	390	40	Ø6 Holes
CJH4000	450	103	52	290	440	40	Ø6 Holes
CJH5000	550	103	52	290	440	40	Ø6 Holes

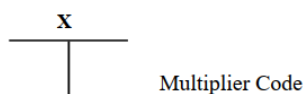
MULTIPLIER CODE

Code	A	B	C	D	E	F	G	H	X	Y	Z
Multiplier	10^0	10^1	10^2	10^3	10^4	10^5	10^6	10^7	10^{-1}	10^{-2}	10^{-3}

Coding



Formula



Example :

$$10.2K\Omega = \begin{matrix} 102 \\ \downarrow \\ 02 \end{matrix} X \begin{matrix} 2 \\ \downarrow \\ C \end{matrix} 10 \Omega = 02C$$

$$33.2\Omega = \begin{matrix} 332 \\ \downarrow \\ 51 \end{matrix} X \begin{matrix} -1 \\ \downarrow \\ X \end{matrix} 10 \Omega = 51X$$

Value	Code	Value	Code	Value	Code	Value	Code	Value	Code
100	01	162	21	261	41	422	61	681	81
102	02	165	22	267	42	432	62	698	82
105	03	169	23	274	43	442	63	715	83
107	04	174	24	280	44	453	64	732	84
110	05	178	25	287	45	464	65	750	85
113	06	182	26	294	46	475	66	768	86
115	07	187	27	301	47	487	67	787	87
118	08	191	28	309	48	499	68	806	88
121	09	196	29	316	49	511	69	825	89
124	10	200	30	324	50	523	70	845	90
127	11	205	31	332	51	536	71	866	91
130	12	210	32	340	52	549	72	887	92
133	13	215	33	348	53	562	73	909	93
137	14	221	34	357	54	576	74	931	94
140	15	226	35	365	55	590	75	953	95
143	16	232	36	374	56	604	76	976	96
147	17	237	37	383	57	619	77		
150	18	243	38	392	58	634	78		
154	19	249	39	402	59	649	79		
158	20	255	40	412	60	665	80		

MARKING

Label shall be marked with the following items:

1. Company name or Logo
2. TE Series Number
3. Resistance Value
4. Tolerance
5. Date Code (YYWW)

Note: Style of Marking – Laser



PACKAGING SPECIFICATION

Type	Primary Packing	Filler Material	Export
CJH1250	3ply Corrugated Box, 1 pc. per Box	Air Cushion Package or Corrugated Sheet	Sea shipment box
CJH1500			
CJH2000			
CJH3000			
CJH4000			
CJH5000			

ENVIRONMENT RELATED SUBSTANCE

This product complies with the applicable requirements of the EU RoHS Directive, EU PAHs requirements, EU PFOS requirements, and halogen-free material expectations. Ozone-depleting substances are not used in the manufacturing process for this product. This product is not manufactured using chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrobromofluorocarbons (HBFCs), or other ozone-depleting substances at any stage of manufacture.

STORAGE CONDITION (MSL1)

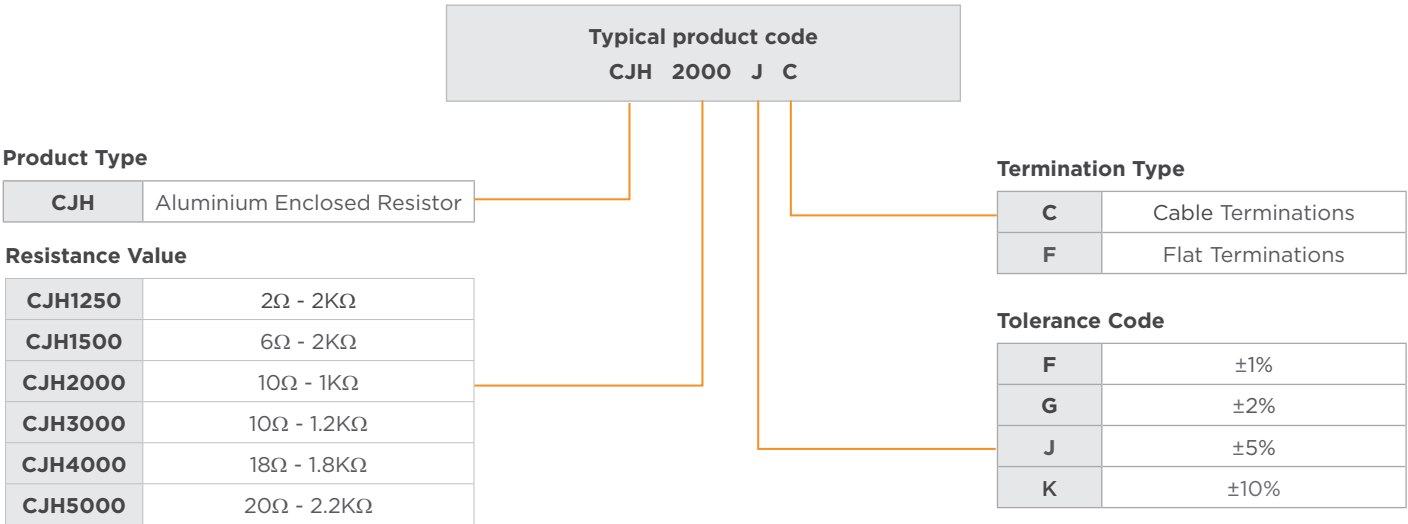
The performance of these products, including solderability, is guaranteed for two years from the date of arrival at the customer location, provided the products remain in the original delivered packaging and are stored at 5°C to 35°C and ≤75% RH (non-condensing). Even within this period, the products should not be stored under conditions that may adversely affect electrical performance, solderability, or packaging integrity.

1. In salty air or in atmospheres containing corrosive gases such as Cl₂, H₂S, NH₃, SO₂, or NO₂.
2. In direct sunlight.

Aluminium Enclosed Resistor

Type CJH Series

ORDERING INFORMATION



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